ECOSYSTEM ADVISORY SUBPANEL REPORT ON CLIMATE VULNERABILITY ASSESSMENT REPORT

The Ecosystem Advisory Subpanel (EAS) appreciates the presentation by Dr. Michele McClure on the NOAA Fisheries California Current Fish Climate Vulnerability Assessment (CVA). The EAS recognizes the CVA as a promising tool that can identify future areas of scientific investigation and management focus, and help the Council prepare for climate change.

It is noted that the CVA is a qualitative tool, not a quantitative analysis, and thus is appropriate for use as a strategic risk analysis tool to help inform science and management decisions, but not as prescriptive advice. The EAS recognizes that the CVA may be helpful to the Council in the following ways (but not limited to):

- Identifying which species are most in need of additional scientific research to understand their potential responses to future climate scenarios.
- Helping to illuminate the nature of individual species' vulnerability, and to inform consideration of mechanisms to protect vulnerable life stages or locations.
- Distinguishing between those species that could need more precautionary management (i.e., those that are highly vulnerable), and those that may not (i.e., those with low vulnerability).
- Identifying helpful innovations to incorporate climate information into single-species science and management, e.g., via stock assessments or harvest control rules.
- Alerting the Council and fishing communities about potential vulnerabilities so they may consider possible adaptive actions.
- Using the results of the CVA to promote further research about the effects of climate change on communities.

The EAS notes that two types of factors that contribute to sensitivity: 1) that which is inherent in the natural ecosystem, and 2) that which is directly influenced by humans. For example, while life history or habitat specificity of a given species is inherent to its biology, stock size is influenced by additional factors such as harvest, pollution, and dams. Subsequent analysis could separate these two types of factors, to enable comparison of vulnerabilities with and without direct human influence. The EAS recognizes that the CVA and other such analyses will need to be updated periodically as new knowledge is gained. Moreover, it could be beneficial to examine applications of CVA used elsewhere that might inform its potential value for the Council.

In conclusion, we encourage continued development and use of the Climate Vulnerability Assessment tool.

PFMC
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